Electronic Acknowledgement Receipt						
EFS ID:	6812634					
Application Number:	10043440					
International Application Number:						
Confirmation Number:	1336					
Title of Invention:	METHOD AND SYSTEM FOR MODELING CELLULAR METABOLISM					
First Named Inventor/Applicant Name:	Costas D. Maranas					
Customer Number:	27407					
Filer:	John Darrell Goodhue/Betty Haverkamp					
Filer Authorized By:	John Darrell Goodhue					
Attorney Docket Number:	P05468US1					
Receipt Date:	14-JAN-2010					
Filing Date:	10-JAN-2002					
Time Stamp:	15:53:42					
Application Type:	Utility under 35 USC 111(a)					
Payment information:	Payment information:					

# Submitted with Payment

File Listing:								
Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)			
1	Foreign Reference	0_JP2000268018A.pdf	715616 33cb1db023b1c306c65d91802c905d97446	no	13			

no

## Warnings:

Information:

Warnings:					
147 ·		1			
10	NPL Documents	Arita_Metabolic_Construction_ Theor_2000.pdf	189772 c0ds2bs6s96999998dbde195s300b001d0 also	no	17
Information:					
Warnings:		I			
9	NPL Documents	Arita_Metabolic_world_Proc- Natl-2004.pdf	ca1dd1411c2fa794f13733c921bcce6ababb 78a2	no	5
		Ante Marchalia and 1 C	1482932		
Information:					
Warnings:			33419		
8	NPL Documents	based_NatureBiotechnology-1 998.pdf	8e31337225d4541bcbcc846843a7e5823cc	no	6
		Arigoni_Genome-	1154738		
Information:					
Warnings:		I	97.91		
7	NPL Documents	An and a lingam_Hierarchical An nals Ops Res_1992.pdf	561741 dt2f4cd4c38609c206288ta6c294a167?ea1 676f	no	11
Information:					
Warnings:		1			
6	6 Foreign Reference	0_WO_2004_018621.pdf	Jeeb3047b6db6fe4a5520846db377b0b600 sse97	no	32
			5017398		
Information:					
Warnings:			Ge#64		
5	Foreign Reference	0_WO_2001_90346.pdf	18bes68b3Sd2dv93c3dfe765192029e548 6e864	no	139
			21702846		
Information:					
Warnings:			06426		
4	Foreign Reference	0_WO_2000_42559.pdf	12295771 21072cdsd30962961760e652e01bf8cos23 06426	no	66
Information:					
Warnings:					
3	Foreign Reference	0_WO_2000_18906.pdf	39571a2c7b4a6648dc5b952b4817dc5987 94304	no	92
			15888141		
Information:					
Warnings:			412		
2	Foreign Reference	0_WO_1998_18814.pdf	Ded460224c80e8891d(S0a681235744102)	no	58
			9547365		

11	NPL Documents	Badarinarayana_Selection_Anal ysis_Biotechnol_2001.pdf	1458262 alkec9d86a93822d993cda6893c1ebbc0s96 500d	no	6
Warnings:			ı		
Information:					
		Bailey-	1513791		
12	NPL Documents	Gribskov_Combining_evid_Bioi nformatic_1998.pdf	9eb22dce45a6a38/949c9be6e597817789b	no	7
Warnings:			dd086		
Information:					
illorillation.					
13	NPL Documents	Bhaskar_Applications_RevChe	9668896	no	72
13	W E Documents	mEng2000.pdf	64e11dd224:c26ebf0e9509e8dd9f38d0db 75de	110	/2
Warnings:					
Information:					
14	NPL Documents	Biebl_Microbial_ApplMicrobiol	2295627	no	9
	WE Documents	1999.pdf	7d6179240807d1f61e7a9568b0f31d8ca3b bcd54	110	,
Warnings:					
Information:					
		si c 1. c c	2046494		
15	NPL Documents	Blattner_Complete_Genome_S cience_1997.pdf	7094f557795dba09ccd86702856766749d 419ca	no	10
Warnings:					
Information:					
			2749405		
16	NPL Documents	BogaradAndDeem_hierarchical _ProcNatlAcadSci1999.pdf	2749405	no	5
		_FTOCIVATIACAGSCI1999.pdf	d8cfe6dd67478382b97c7c66750u936bea0 959ba		
Warnings:					
Information:					
17	NPL Documents	Bond_Electricity_prod_Microbi	620767	no	8
		ol_2003.pdf	f3699d895d755918f99c46971a531117551 0a62		
Warnings:			<u> </u>		
Information:					
			1782173		
18	NPL Documents	Burgard_Optimization_Biotech nolBioeng2003.pdf	41eed578119c41ff31abc73838066211ccb	no	8
Warnings:			c(24		
Information:					
			2819508		
	HOLD.	Burgard_Probing_biotechnolBi		no	10
19	NPL Documents	oeng2001.pdf	f58b6720900b5bbe7c480e94d30176de5da 51392		
19 Warnings:	NPL Documents	oeng2001.pdf	f58bb729906b5bbe7c480e94d30176de5da 51392		

	NPL Documents  NPL Documents	pdf  Burgard_1MinimalReaction_Bi otechnolProg_2001.pdf  Burgard_1Optknock_Biotechn olBioeng2003.pdf	### HEDDS 464 FEB And 17 Feb 1	no	7
Information:  21  Warnings: Information:  22  Warnings: Information:	NPL Documents	otechnolProg_2001.pdf  Burgard_1Optknock_Biotechn	e9154c942476244017.65x9d2x6sdb71c5xd 9x11 2578037		
Warnings: Information:  22 Warnings: Information:	NPL Documents	otechnolProg_2001.pdf  Burgard_1Optknock_Biotechn	e9154c942476244017.6529b24c6a9b71c65d		
Warnings: Information: 22 Warnings: Information:	NPL Documents	otechnolProg_2001.pdf  Burgard_1Optknock_Biotechn	e9154c942476244017.6529b24c6a9b71c65d		
Information:  22  Warnings: Information:		Burgard_1Optknock_Biotechn	2578037	no	11
Information:  22  Warnings: Information:				no	11
22 Warnings: Information:				no	11
Warnings: Information:				no	11
Warnings: Information:	NPL Documents	oibioerig2003.pci	R24723923186sb22226sc00ed3682b68e9 711ad		
Information:	NPL Documents				
	NPL Documents				
23	NPL Documents				
		Cameron_Metabolic_Biotechn	2523461	no	10
		olProg1998.pdf	8b6578de113fs1c891afd0ae8c6c23a7f2a4 ae7c		
Warnings:					
Information:					
24	NPL Documents	Causey_Engineering-	1920042	no	6
		Escherichia-coli-for-efficient.pdf	cf533e459387679s95sal23bbcc29061882 72198		•
Warnings:					
Information:					
25	NPL Documents	Chen_Computer_Program_Bio	610879	no	3
	N E Documents	Techniques 1997.pdf	499462x94d19cffSc)f0114019cc62xe7522x 6ab	110	1
Warnings:		•			
Information:					
26	NPL Documents	Chistoserdova_C1_transfer_en	1455481	no	5
20	W E Documents	zymes_1998.pdf	afd4fcc3787c81c5cce83c30cfs6234bce19a eSa	110	,
Warnings:					
Information:					
27	NPI Documents	Cho_1Ethical-	1442462	no	10
27	NPL Documents	considerations_Science_1999. pdf	19x5a859c14ebd5888925883b13000cd9687 12xl0	no	10
Warnings:					
Information:					
28	NPL Documents	Compagno_Glycerol_Prod_Bio	1207177	no	5
20	2 bocaments	technolProg1996.pdf	es6e3adbf612b7F451ce6de66f0100fc1300 0dec		,
Warnings:		•			

29	NPL Documents	Covert_Metabolic_modeling_T	2685425	no	8
		rendsBiochemSci2001.pdf	3b5bbbc57abc5107692a6a2e1eelbeb0f0b6 0bf43		
Warnings:					
Information:					
30	NPL Documents	Covert_Transctiptional- regulation-in-constraints_2002.	2421909	no	7
4.31		pdf	99aabb0092af316ae7c68803aea69c53202 b2287		
Warnings:					
Information:					
		Datta_Technological_FEMSMic	754930		
31	NPL Documents	robiolRev1995.pdf	11:0802039558228395e682e0efc43f30936 33a8	no	11
Warnings:			338		
Information:					
illioilliation.					
32	NPL Documents	David_Reconstruction-of-the- central_Eur-J-Biochem_2003.	2925980	no	11
		pdf	ds867ab71c5e810523f08255f785d3ee0918 a340		
Warnings:				·	
Information:					
22	NDI D	Delgado_Identifying-Rate-	548290		6
33	33 NPL Documents controlling_Bi	controlling_BiotechnolProg_19 91.pdf	75e6349232cssi015f45dc173030f0089cabc bc74	no	
Warnings:					
Information:					
		B . 6	1521299		
34	NPL Documents	Demain_Stunning_Achiev_AS MNews1999.pdf	19379-179-100-189-8190481693-1142-118-	no	10
			38928d78c309e18b8380d85ff59d3d9s08e 6b645		
Warnings:					
Information:				-	
35	NPL Documents	Edwards_HowWill_BiotechnolB	2347638	no	8
		ioeng1998.pdf	4cc22dfc62430d24de83532df3f08b9155cb 4580		
Warnings:					
Information:					
	NO. P	Ellis_Univ-Minn-	768280		4
36	NPL Documents	Biocatalysis_Nucl-Acids- Res_2003.pdf	091a868487a32973c47ca4569c41fc6641c9 470c	no	
Warnings:					
Information:					
		Eppstein_Finding_35thIEEESy	3083001		
37	NPL Documents	mp_1994.pdf	9b864842ccd22751e59678ae2e8605a284 c2ed	no	12
		1			
Warnings:					

38	NPL Documents	Fisher_The_Langragean_Mana	462674	no	2
30	W E Documents	geSci1981.pdf	59660ad1f05c8c27eec4eb5421bd2/d27ce0 340d	110	2
Warnings:					
Information:					
39	NPL Documents	Forster_Genome-Scale- Reconstruction-of-the-	2474134	no	11
4		Saccharomyces.pdf	cfd25c476342a43a4813a99cdc24282dcd4 001f3		
Warnings:					
Information:					
40	NPL Documents	Geoffrion_Lagrangean_relax_ MatProgramStud1974.pdf	5463257	no	34
Warnings:			fc657494460cd19471ddb2ac3ce8c349d25 1a483		
Information:					
illorillation.					
41	NPL Documents	Gupta_Escherichia_coliJBact	1714168	no	6
		eriol1989.pdf	d6862b36d4b6d368s1644c40230c716540 435795		
Warnings:					
Information:					
	NDI D	Hartlep_Study_two_stage_App	1629415	no	7
42	42 NPL Documents	MicrobiolRiotechnol2002 ndf	6)f0dSb87f17bf156c364833864c16820432 8837		,
Warnings:		'	<u>'</u>		
Information:					
43	NPL Documents	Hatzimanikatis_Application_Bi	1710455		
l l		otechnol-Bioeng_1998.pdf	bcd93802d16a681b3e3bb7ee67e229b9bc	no	8
Warninger		otechnol-Bioeng_1998.pdf	bcd93802d16a681b3e3bb7ee67e229b5bc 6de455	no	
-		otechnol-Bioeng_1998.pdf	bod91802d16a681b3e3bb7ee67e229b5bc 6de455	no	8
		otechnol-Bioeng_1998.pdf		no	8
	NPL Documents	Heinrich_A-linear-steady-	bod91992d16a681b3c3bb7cc67c225b5bc 6dc455 1914751	no	7
Information:	NPL Documents				
Information:	NPL Documents	Heinrich_A-linear-steady-	1914751		
Warnings:  Information:  44  Warnings: Information:	NPL Documents	Heinrich_A-linear-steady-	1914751		
Information:  44  Warnings: Information:		Heinrich_A-linear-steady- state_Eur-J-Biochem_1974.pdf	1914751	no	7
Information:  44  Warnings:	NPL Documents  NPL Documents	Heinrich, A-linear-steady- state_Eur-J-Biochem_1974.pdf  Henricksen_Growth- energetics-and-metabolic	1914751 dad65-65daca871115736fds59336fds6		
Marnings: Information:		Heinrich, A-linear-steady- state_Eur-J-Biochem_1974.pdf  Henricksen_Growth- energetics-and-metabolic	1914/51  ded5-cl5de-celf11117 Meth/92346-ded 9144  4191516	no	7
Information:  44  Warnings: Information:  45  Warnings:		Heinrich, A-linear-steady- state_Eur-J-Biochem_1974.pdf  Henricksen_Growth- energetics-and-metabolic	1914/51  ded5-cl5de-celf11117 Meth/92346-ded 9144  4191516	no	7
Information:  44  Warnings: Information:		Heinrich, A-linear-steady- state_Eur-J-Biochem_1974.pdf  Henricksen_Growth- energetics-and-metabolic	1914751  ded5-dridue#F14523Mdn6923dn8dx f166  4191516  brosco9Mdc67798M70H10046x7m5m  1839992  22799Md6MMR45M64M70P2xxxd6dx1	no	7
Warnings: Information:  44  Warnings: Unformation:  45  Warnings: Unformation:	NPL Documents	Heinrich_A-linear-steady- state_Eur-J-Biochem_1974.pdf  Henricksen_Growth- energetics-and-metabolic- fluxes.pdf  Hugler_Malonyl_Coenzyme_JB	1914/51  deads-riskewall/1457/Midnis/2340-bid  4191516  boss-sisked-7998-12845-57-679  1839992	no	7

47	NPL Documents	Hutchinson_Global-	1585304	no	5
		transposon_Science_1999.pdf	Sec9b3c7c04554aeff0769462d08364e862 8677		
Warnings:					
Information:					
48	NPL Documents	Ibarra_Escherichia_coli_K12_N ature2002.pdf	1178799	no	4
4.3		ature2002.pdr	cb1cf1c4e68b4d1df41deb77d2ecca8805fe 4c54		
Warnings:					
Information:					
49	NPL Documents	ltaya_An-estimation-of- minimal-genome_FEBS-	282502	no	4
		Lett_1995.pdf	76392467e0u33cb457039f1caf1275953395 37df		
Warnings:					
Information:					
50	NPL Documents	Jorgensen_Metabolic-flux- distributions_BiotechnolBioen	1259051	no	15
		g_1995.pdf	310d3fdc77217dcafb2996lde351aac0b1fe d41b		
Warnings:					
Information:					
51	NPL Documents	KacserAndBurns_ControlOfFlux	15180232	no	42
		1973.pdf	45b455192ae39441c8298530a3d25d0864 bd1531		
Warnings:					
Information:					
52	NPL Documents	Kanehisa_The-KEGG- resource_Nucl-Acids-Res_2004.	62021	no	4
		pdf	Sa6ee9acf371434648f6c511e0eb5100bd97 adcd		
Warnings:					
Information:					
53	NPL Documents	Kanehisa_KEGG-kyoto- encyclopedia_Nucl-Acids-	718965	no	4
		Res_2000.pdf	87e1d5fb0c8913e4s23ccfd70fs327c2e846 Sw85		
Warnings:					
Information:					
54	NPL Documents	Karp_TheEcoCyc-and- MetaCyc_Nucleic-Acids-	964904	no	4
•		Res_2000.pdf	46d9cdsc74f7008fc2e7845fsa978e4a18e1 8023		-,
Warnings:					
Information:					
		Karp_The-EcoCyc-	536983		
55	NPL Documents	Database_Nucl-Acids-	bbs12c2c57f30f38075b568e9c1s64451d2	no	3
55 Warnings:	NPL Documents		bbs12c2c57f50f588975b568e9c1afd451d2 1020	no	3

This Acknowledge	rement Receipt evidences rec	eipt on the noted date by the U	SPTO of the indicated	documents	
		Total Files Size (in bytes)	1790	98244	
Information:					
Warnings:					
	N E Documents	Bioeng_1984.pdf	ab593d1c8f4351b2ed88clzf6f7206171c23 2e14		
60	NPL Documents	Kompala_Cybernetic- Modeling Biotechnol-	2854408	no	10
Information:					
Warnings:					
3,	NF E Documents	atics_2003.pdf	ef0eb5640713932a0becf0ab56f7abd272b efi2a	110	,
59	NPL Documents	Klamt_FluxAnalyzer_Bioinform	2015799	no	9
Information:					
Warnings:		· ·			
36	urrOpinBiol2003.pdf	22336bd1e0fe56c649=38221c7169e33572 6e031	no	0	
58 NP	NPL Documents	Kauffman_Advances in_flux_C	1341290		6
Information:					
Warnings:					
57	NPL Documents	Kataoka_Studies_in_hydrogen _WatSciTech1997.pdf	c58se1807763980alb3547c3c3201763cs22 7c69	no	7
57			1196354		
Information:					
Warnings:		<u>'</u>			
56	NPL Documents	cl-Acids-Res_1999.pdf	1086ec589cbe46edc52db67c6756994d3c1 dd947	no	4
	56 NPL Documents Karp_Ecocyc_Encyclopedia_N	877368	no		

Post Card, as described in MPEP 503.

#### New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

#### National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

### New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.